

**Notice of Allowability**

Application No.

10/722,535

Examiner

Pedro J. Cuevas

Applicant(s)

FOGARTY ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed on November 28, 2003.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 28 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 11/10/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**DETAILED ACTION**

***Allowable Subject Matter***

1. Claims 1-20 are allowed.

***Reasons For Allowance***

2. The following is an examiner's statement of reasons for allowance.

The prior art of record, taken alone or in combination, does not teaches:

the design of a method to start a combined unit gas turbine and electrical unit having a static start drive as described on:

independent claim 1, comprising the steps of:

accelerating the combined unit beyond the self- sustaining speed by applying torque generated by the turbine; and

as the combined unit accelerates to synchronous speed, applying braking torque from the static start drive steady the combined unit at the synchronous speed;

independent claim 10, comprising the steps of:

(a) applying a starting variable frequency voltage from the TFC to a winding of the generator to accelerate the combined unit to a turbine self-sustaining speed, wherein the starting variable frequency voltage is selected by the TFC based on comparison of an actual rotational speed of the combined unit and a self- sustaining speed reference value;

(b) accelerating the combined unit beyond the self- sustaining speed reference value by applying torque generated by the turbine;

(c) during step (b) and as the combined unit accelerates to a synchronous speed, minimizing torque applied by the TFC and generator; and

(d) after step (b) and as the combined unit towards the synchronous speed, applying a braking torque from the TFC to steady the combined unit at the synchronous speed, wherein the braking torque value is selected based on a comparison of the actual rotational speed of the combined unit and the synchronous speed reference value; and

the construction of an apparatus to start a combined unit gas turbine and generator unit as described on independent claim 17, comprising:

an auxiliary winding of the generator having an auxiliary armature output;

a thyristor frequency converter (TFC) connectable to the auxiliary armature output and further comprising TFC controller, wherein said TFC generates a variable frequency voltage determined by said TFC controller;

a turbine regulator controlling gas turbine power output; and

a synchronizer sensing a load voltage frequency of a power system load to which the generator connectable and supply voltage frequency output by the generator, and generating control commands issued to the turbine regulator and

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TFC to cause the regulator and TFC to adjust a speed of the gas turbine and generator unit.

Dependent claims 2-9, 11-16, and 18-20 are considered allowable by their respective dependence on allowed independent claims 1, 10, and 17.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (571) 272-2021. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pedro J. Cuevas

June 10, 2005



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